Audit of
Milwaukee Police Department
3rd District Capital Project

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City of Milwaukee, Wisconsin

October 2003

Table of Contents

City of Milwaukee

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October 16, 2003

To the Honorable
the Common Council
City of Milwaukee

Dear Council Members:

The attached report summarizes the results of our audit of the Milwaukee Police Department 3rd District Capital Project to construct and equip a new 3rd District Police Station and Data Communications Center.

The Audit disclosed significant weaknesses in City capital project management, but no financial irregularities.

Audit findings and recommendations are discussed in the Audit Conclusions and Recommendations section of the report, which is followed by responses from City Departments.

Appreciation is expressed to the Milwaukee Police Department, the Department of Public Works, the Milwaukee Fire Department, the Department of City Development, and the Department of Administration for the full cooperation extended to the auditors.

Very truly yours,

W. MARTIN MORICS
Comptroller

I Audit Scope and Objectives

This is an Audit of the City of Milwaukee Police Department 3rd District Capital Project (the Project), as requested by 16th District Alderman Michael J. Murphy. This Project includes the construction of a new building at 49th and Lisbon Avenue to house the 3rd District Police Station and a Data Communications facility, as further detailed under Project Description and Status.

The Audit covered the entire MPD 3rd District Capital Project, including project definition, budgeting, bidding, change orders, administration, and reporting. However, certain technology aspects are not yet completed and therefore could not be thoroughly audited.

The Audit included interviews with City personnel and an extensive examination of City and outside contractor records. The Audit also utilized a construction-consulting firm to a limited degree.

II Project Background

This is an immense and complex Project that has been underway for over nine years, incorporating both building construction and technology implementation at three separate locations, and involving several City departments.

In 1994 the City Department of Public Works (DPW) and outside consultants conducted MPD facility assessments. These studies called for the construction of a new MPD 3rd District Police Station and the remodeling of the old station to house an MPD Data Communications Center. The City organized a site selection committee to identify potential locations for the new 3rd District Police Station. The Project plan was revised in 1996 to construct a new building to house both the Police Station and Data Communications Center at 49th and Lisbon Avenue, on a site that the City did not own or control at the time. After site acquisition was completed by the Department of City Development (DCD), and after DPW awarded the necessary contracts, building construction began in early 2000 and was completed around the end of 2001. MPD and the Milwaukee Fire Department (MFD) are in the process of installing new Data Communications Center technology, which should be completed in 2004. This Project

also included a major MPD Radio Shop renovation and the installation of emergency generators in the Police Administration Building.

III Audit Conclusions and Recommendations

A. Summary Conclusions

The MPD 3rd District Capital Project can be expected to achieve its major public safety objectives. **The Project resulted in the construction of a new high quality Police Station and Data Communications Center. According to MPD, the new technology being implemented in the Data Communications Center as part of the Project will replace failing technology and will facilitate significant improvements in public safety operations.**

According to MPD, maintenance costs for the old Automated Fingerprint Identification System (AFIS) tripled in recent years and the system was failing. MPD indicates that it is the last known customer using this version of the Computer Aided Dispatch (CAD) system and vendor support was ending. Also, MPD has had difficulty extracting and reporting data from the old CAD and Records Management System (RMS).

According to MPD, all voice and data communications for MPD and MFD will utilize the new SONET Wide-Area-Network, which is significantly more reliable than the previous network. The new emergency 911 system will more efficiently route calls between MPD and MFD, and will function at both the primary and alternate dispatching locations. The new 911 system will also be able to identify the location of cellular 911 calls, which was not previously possible. The new CAD system, in conjunction with a new radio system being implemented in a different capital project, will display the map locations of all squads, enhancing officer safety and improving dispatching. The new RMS, document imaging system, and digital mugshot and fingerprint systems will enhance data availability and improve investigative efficiency and effectiveness. MPD reports that the new AFIS resulted in a 271 percent increase in latent print identifications during just the first nine months that it was in operation in 2002. These improvements are described in greater detail by MPD in the Appendix.

While the City will clearly benefit from this MPD 3rd District Capital Project, **the Audit found significant weaknesses in capital project management that need to be**

corrected for future projects. After over nine years of development, the Project is still not fully operational. The automated dispatching and records management systems for MPD and the Milwaukee Fire Department (MFD) have yet to be implemented. The enhanced emergency '911' system is only partially installed. These components are planned for implementation in 2004.

The Audit found weaknesses in every area of capital project management, namely in planning, budgeting, administration and oversight, and reporting. Together, these weaknesses resulted in the MPD 3rd District Capital Project escalating from its initial cost estimate of $20.8 million in 1994 to a current estimate of over $64 million when finished around 2004. **The primary factors causing this tripling in costs are repeated Project scope expansion and inadequately supported cost estimates. Nevertheless, the Audit disclosed no irregularities in the expenditure of project funds**.

Although cost was considered in procurement decisions, overall Project cost does not appear to have been a major factor in Project planning. **In fact, it is unclear if any City department assumed responsibility for controlling the overall cost of the Project.** Evolving needs as determined by MPD drove most decisions regarding Project scope and function, taking priority over cost control. Examples of this were decisions made during the Project to relocate the open-records function from the Police Administration Building downtown to project facilities on Lisbon Avenue, expand the parking structure, and add a major MPD Radio Shop renovation to the Project.

The MPD 3rd District Capital Project was budgeted incrementally, providing the Common Council with little if any opportunity to make informed "go-no-go" decisions. A kind of "foot-in-the-door" approach to Project budgeting was followed, with vaguely defined components and increasing budgets as the Project progressed. Budget increases were often justified with only general reference to new requirements, additional outside funding, or simply "to complete the Project".

Insufficient interdepartmental coordination, passive contractor oversight, and a lack of meaningful status reporting for top City officials adversely affected the MPD 3rd District Capital Project. The Project was hampered by the overlapping and sometimes conflicting responsibilities of the four departments involved; MPD, MFD, the Department of Public Works (DPW), and the Department of City Development (DCD). Disputes arose between the departments, adversely affecting coordination.

The building construction and technology components were not coordinated with adequate emphasis on timely completion of the entire Project. This has resulted in a currently vacant third floor dispatching area in the new 3rd District Station and Data Communications Center building, and a continuing Project that is over nine years since inception.

Coordination problems also arose between MPD and MFD in the development of automated dispatching and records management systems. At first the departments intended to share these systems. However, they could not reconcile their respective needs, and are now implementing separate systems. As a result, the automated dispatching and records management component of the MPD 3rd District Capital Project, originally estimated at $3.5 million for both departments, is now expected to cost nearly $16 million when implemented separately. Neither dispatching system is yet operational.

DPW delegated much of the day-to-day construction management to an outside contractor. This was appropriate given the stated shortage of experienced DPW staff for this MPD 3rd District Capital Project. However, the Project was hampered by DPW's passive approach to contractor oversight. The construction management contractor did not provide the status reporting and other services required by its contract, and DPW did not enforce performance.

The Audit found no written financial or completion status reports for Project managers, department heads, or the Common Council. This is a significant deficiency in a Project of this size and duration. Periodic financial and completion status reports can enhance accountability and enable project managers to make timely decisions. This lack of reporting prevented the Audit from identifying the cost consequences of the specific weaknesses mentioned above.

The Audit further describes these managerial problems and recommends fundamental changes aimed at improving capital project budgeting, monitoring, and reporting. Implementation of these recommendations for future projects of a size and complexity approaching that of the MPD 3rd District Capital Project will help minimize project delays, excess costs, and promote taxpayer confidence in the City's ability to complete major projects on time and within budget.

B. Project Cost and Completion Status

An accurate accounting for the MPD 3rd District Capital Project was not available for audit. Based on the best available information, costs incurred and estimated through completion by the affected departments currently total over $64 million, as detailed below. The reliability of current department cost estimates cannot be determined.

The "MPD 3rd District Capital Project" is comprised of the following major component activities, along with their completion status and estimated cost. Also, see Exhibit 1 below.

- Acquisition of land for the new 3rd District Police Station and Data Communications Center building was completed in 2000 at a cost of about $2.9 million.
- Construction of the new building, including the Emergency Operations Center, was completed in 2001 at a cost of about $28.8 million. The new District Station is fully operational. Building areas for the Data Communications Center are partially operational, and are awaiting the installation of the remaining technology systems.
- Construction of related infrastructure improvements is essentially complete at a cost of about $4.5 million. Street and sewer improvements cost about $0.5 million. Installation of communications infrastructure cabling and signal transport equipment for the SONET System Wide Area Network is complete and fully operational at a cost of about $3.8 million. Related equipment rooms are running too hot and need new air conditioning, estimated to cost about $0.2 million.
- Installation of MPD technology is underway and is estimated to cost about $17.1 million. A new administrative and emergency 911 telephone system is partially operational at a cost of about $3.7 million. The administrative system for use by MPD, the Milwaukee Fire Department (MFD) and other City departments was fully operational in 2002. The emergency 911 system is installed, but will not be used until the Computer Added Dispatch systems are operational. MPD Computer Aided Dispatch (CAD), Records Management System (RMS), and related technology are expected to be fully operational in 2004 at an estimated cost of about $9.3 million. Decentralized Booking to capture digital mugshots and fingerprints was operational in 2001 at a cost of about $1.0 million. A new Automated Fingerprint Identification System (AFIS), including rapid two-finger

identification, was operational in 2002 at a cost of about $2.3 million. Consulting services for MPD technology are about $0.8 million.

- Installation of MFD CAD and RMS systems, and related technology, is underway at an estimated cost of about $6.5 million.
- Renovation of the MPD Radio Shop is nearly complete at a cost of about $2.4 million.
- Installation of emergency generators at the Police Administration Building was completed in 1999 at a cost of about $1.9 million.

Exhibit 1: Project Cost and Completion Status ($ millions)

Component	Year Complete		Cost
Land Acquisition	2000		$2.9
Building Construction	2001		$28.8
Infrastructure (Street, Sewer, Communications)			$4.5
MPD Technology			$17.1
CAD and RMS	In-Process	$9.3	
Telephone and Emergency 911	In-Process	$3.7	
AFIS	2002	$2.3	
Decentralized Booking	2001	$1.0	
Consulting Services	In-Process	$0.8	
MFD Technology	In-Process		$6.5
MPD Radio Shop Renovation	2003		$2.4
MPD Administration Building Generators	1999		$1.9
TOTAL ESTIMATED COST			$64.1

This $64 million MPD 3rd District Capital Project is financed mainly by City sources with some outside grant funding. MPD capital budgets provide about $51.5 million from general obligation debt. MPD has also obtained about $6.0 million in grant funding for a portion of the MPD technology, a significant amount of outside funding. MFD capital budgets provide about $6.5 million for the MFD technology - all from general obligation debt. The Parking Fund was used for about $0.1 million for landscaping a surface lot at the new building. Exhibit 2 below provides a summary of project funding sources.

Exhibit 2: Project Funding ($ millions)

Source	Funding
City General Obligation Borrowing for MPD	$51.5
City General Obligation Borrowing for MFD	$6.5
Federal Grant Funding	$6.0
City Parking Fund	$0.1
TOTAL FUNDING SOURCES	$64.1

MPD is also undertaking a separate but related five-year project to install a digital trunked-radio system now estimated to cost about $15.0 million, which will utilize the new features of the CAD system. The MPD capital budget currently funds $2.0 million. MPD grants fund about $6.5 million. The remaining $6.5 million is currently unfunded.

C. Project Planning and Budgeting

The planning process failed to provide a basis for adequately defining the MPD 3rd District Capital Project and properly budgeting its components. As a result, there was never a clear definition of exactly what was included in the project at any point in time. While essential to decision making, overall Project cost does not appear to have been a major factor in Project planning. In fact, it is unclear if any City department assumed responsibility for controlling the overall cost of the Project. The MPD 3rd District Capital Project has more than tripled in cost from the original estimate of $20.8 million to the departments' current estimate of over $64 million, primarily due to scope changes and inadequately supported cost estimates.

The scope of the MPD 3rd District Capital Project was changed significantly several times while the Project was underway. The earliest 1994 plan called for the construction of a new 3rd District Police Station and the reconstruction of the old station into a Data Communications Center. The plan was revised in 1996 to consolidate facilities into a single building at its current location, which the City did not own or control at that time. It was again revised in 1998 to add automated MFD dispatching and to expand the parking structure for staff parking. The plan was again revised in 1999 to add installation of emergency generators at the Police Administration Building and a limited Radio Shop renovation. In 2000 the scope of the MPD Radio Shop renovation was significantly increased to accommodate a relocation of the backup dispatching facility to the Radio

Shop. Finally, the plan was revised in 2001 to add an open-records facility to the new building. These repeated scope changes appear to be ad-hoc decisions with insufficient focus on what was ultimately needed. As a result, the planning process used for this Project did not control the expansion of Project scope.

Most of the MPD 3rd District Capital Project cost estimates were not adequate or meaningful for decision-making. Nevertheless, these inadequately supported estimates were used to establish annual budget appropriations.

In 1994 the cost of constructing a new 3rd District Station and renovating the old station for the Data Communications Center was estimated at $20.8 million, including land acquisition, infrastructure, and technology. The new 3rd District Station was estimated at $8.8 million, and the Data Communications Center was estimated at $12.0 million. These estimates were included in the 1995 MPD Capital Improvements Program and MPD capital budget.

The actual total cost for constructing and furnishing the new building and installing technology will likely be at least $59.8 million.

- The cost of land acquisition was not estimated separately, but is actually about $2.9 million.
- The cost for constructing the new building is about $28.8 million.
- The cost of DPW infrastructure, including the SONET System Wide Area Network was not estimated separately, but is actually about $4.5 million.
- The cost of installing MPD technology at first was not separately estimated, then later was estimated at $11.4 million, and is now estimated at about $17.1 million.
- The cost of installing MFD technology at first was not separately estimated, then later was estimated at $1.5 million, and is now estimated at about $6.5 million.

In 1999 the cost of renovating the MPD Radio Shop was estimated at $0.3 million, but is now actually about $2.4 million.

In 1999 the cost of installing emergency generators in the Police Administration Building was estimated at $1.2 million, but is now actually about $1.9 million.

With actual costs of $59.8 million or more for the 3rd District Police Station and Data Communications Center, $2.4 million for the Radio Shop, and $1.9 million for Police

Administration Building generators, the City will have invested over $64 million in the MPD 3rd District Capital Project at completion. As mentioned earlier, the Project was originally estimated at $20.8 million.

The budget process used for the Project did not establish adequate criteria or standards for department cost estimates. Budget estimates appear to have been inadequately supported and generally outdated when adopted.

The MPD 3rd District Capital Project was funded incrementally over a ten-year period. The budget process applied to this Project lacked adequate justification information for sound Common Council budget decisions. **This pattern indicates a kind of "foot-in-the-door" approach where initial funding of a generally defined Project was used to introduce ever expanding Project functions and added costs**.

Exhibit 3 below is a chronology showing how the Project scope and cost continually increased from 1994 to present. These estimates were obtained from City budget and Project file documents.

Exhibit 3: Chronology of Increases in Project Scope and Cost ($ millions)

Date	Activity	Cost	Total Cost
1994	New MPD 3rd District Station proposed	$8.8	$8.8
1994	Convert old Station to Data Communications Center	$12.0	$20.8
Dec 96	MPD states intent to combine 3rd District Station and Data Communications Center in single building		$20.8
Feb 97	MPD updates Project estimate	$9.6	$30.4
Sep 97	DPW proposes alternatives at 46th and Lisbon Avenue	$1.4	$31.8
Apr 98	DPW updates estimate for 49th and Lisbon Avenue	$0.5	$32.3
Oct 98	DCD updates site acquisition estimate	$0.4	$32.7
Dec 98	DPW consultant updates estimate including staff parking	$4.0	$36.7
Sep 99	DPW consultant pre-construction bid estimate	$0.9	$37.6
Oct 99	MPD estimates Radio Shop upgrade	$0.3	$37.9
1999	MPD estimates emergency generators at PAB	$1.2	$39.1
1999	MFD proposes 2000 budget for technology	$1.5	$40.6
Late 99	Additional cost for PAB generators	$0.7	$41.3
Early 00	Additional cost for site acquisition	$0.9	$42.2

Date	Activity	Cost	Total Cost
May 00	DPW updates Radio Shop estimate	$0.8	$43.0
Late 00	MFD proposes additional 2001 technology budget	$2.5	$45.5
Mar 01	DPW updates Radio Shop estimate	$0.3	$45.8
Jul 01	Architect estimates adding open-records facility	$0.3	$46.1
00-01	Additional cost for new building	$6.2	$52.3
00-01	Additional cost for infrastructure work	$2.6	$54.9
Jan 02	MPD and MFD decide to develop separate CAD systems		$54.9
2002	MFD proposes additional 2003 technology budget	$2.5	$57.4
2003	Additional cost for Radio Shop renovation	$1.0	$58.4
02-04	Additional cost for MPD technology	$5.7	$64.1

Common Council staff was apparently frustrated by the lack of available information on the MPD 3rd District Capital Project. As a result, the Common Council attempted to better understand Project direction through a Council resolution requiring a Project capital plan.

The Common Council Legislative Reference Bureau (LRB) analyzed the 1998 MPD 3rd District Capital Project budget request and noted that the request was generally not adequately supported and detailed. The LRB in its written comments stated that,

> *"The 1998 Executive Budget provided $4 million for the 'second' phase of the Telecommunications/Data Center Project. However, in its Capital Request, the Department was unable to identify a purpose for the 1998 funding request or identify the scope and content of any planned project 'phases'…At the time of the Police Department's October 24, 1997 Budget Hearing, no facility plan was available for the Council's review. This is a large, undefined project with huge cost implications…the Department indicated it does not know whether the current District 3 will be remodeled or whether a new building is being considered. Therefore, no description of the scope of Phase 2 is available. This makes it difficult to assess adequacy of resources. It is not known how a re-build versus a remodel decision will affect cost projections for this project, if at all…The 1994 consultant study did not provide a construction schedule and does not clearly identify all costs associated with the building. This lack of information on a large capital project is problematic."*

The Common Council requested a capital plan for the MPD 3rd District Capital Project in resolution 971184, adopted November 25, 1997, which states in-part,

> *"The Police Department has not specified the scope or content of any planned phases of the data services/communication center project…The Department of Administration – Budget and Management Division has indicated that the scope of this project is expected to change considerably from what was originally proposed and that the project cost may be closer to $20 million than to the $12 million originally projected…The Common Council has not been given the opportunity to review a facility plan for this large, undefined project…Resolved, By the Common Council of the City of Milwaukee, that the $4 million in borrowing authority…shall not be released until the Common Council has reviewed and approved a capital plan…Further Resolved, That the capital plan …shall identify the site and scope of the project, the construction, operating, equipment and software costs associated with the project and a timeline for completing the project…"*

In response to this Common Council resolution, MPD submitted its capital plan about a year and a half later on June 16, 1999. The MPD capital plan states in-part,

> *"The scope of the project includes construction of a three-story facility to house a 3rd District Police Station, all Police Data Services and Communications Services, and Fire Communications Services. This includes, most notably, all the emergency dispatch functions of both the Police and Fire Departments. The current cost estimate, as the project nears completion of the design phase, totals $36,412,903…"*

While MPD provided the information requested by the Common Council, its capital plan continued to reflect inadequate Project planning. Although the design phase for building construction was near completion in 1999, technology planning had barely begun. The 1999 MPD capital plan estimate of $36.4 million included $11.4 million for technology. As noted above, the Project is currently estimated over $64 million, including about $23.6 million for MPD and MFD technology. Thus, even at June 1999 the estimate of Project costs provided to the Common Council was just over one-half of the current cost estimate. The 1999 MPD capital plan indicated that building construction and technology implementation would both be completed early in 2001. Technology implementation is still underway.

The Budget and Management Division of the Department of Administration recommended approval of this MPD capital plan, apparently without the benefit of standards for such plans or guidelines for evaluating their adequacy. The Common Council approved the plan and released funding with resolution 990475, adopted July 13, 1999.

The MPD 3rd District Capital Project budget also funded certain activities apparently outside the scope of the original Project. Commingling dissimilar activities in one capital project account - the 3rd District Police Station and Data Communications Center, MPD Radio Shop renovation, and Police Administration Building emergency generators - no doubt reduced budgetary control.

Finally, the budget process did not require structured progress reporting by the departments involved in the Project. DPW files indicate only that progress was discussed at meetings with these comments included in meeting minutes. Even now as the Project approaches its conclusion, there is no report available which brings together all elements of the Project to disclose an accurate picture of the financial and physical completion status of the Project.

Recommendation 1: Formalize Planning and Budget Proposal Requirements

The importance of adequate project planning cannot be overemphasized. Some of the major weaknesses disclosed in the Audit resulted from insufficient front-end planning.

The Budget and Management Division of the Department of Administration (DOA-Budget) should re-examine the City capital project planning and budgeting process. The planning process should promote well-defined projects capable of being completed on time and within budget. Thorough project planning should be enforced through an improved capital budgeting process.

A reliable project plan is essential for meaningful funding decisions, and should be the key document in the capital project budgeting process. A final funding decision should not be made until an adequate project plan document is available. This will allow for more informed "go-no-go" funding decisions, and will help to ensure that major planning is finalized before project implementation or construction begins. If a proposed

project cannot be reliably defined and estimated as to resources, time and cost, it should be divided into separate projects that can be so defined, each with an adequate front-end project plan and separate budget. For example, the MPD 3rd District Capital Project could have been divided into a separate building project and one or more technology projects.

DOA-Budget should develop standards and guidelines for use by City departments in the preparation of capital project plan documents, including at least the following:

- A statement defining the project scope and work-product deliverables and describing what is and is not included in the project. A good project definition is a prerequisite for adequate management of a project. The project plan should not be considered finalized until the scope and deliverables are defined and finalized.
- A statement justifying the need for the project, with its expected benefits.
- An adequately detailed and supported cost estimate for the entire project, including a description of how the cost estimate was developed. Such estimates will often involve the work of professional estimators and engineers, and should include adequate contingency provisions and supporting documentation. Large, complex projects should be divided into two or more smaller projects that begin with separate planning phases, as discussed below.
- A statement on funding sources for the entire project.
- A well supported estimate of the project duration in weeks, or months.
- A work plan describing the sequence and schedule of major required work tasks, highlighting interim or "milestone" work-product deliverables. Responsibility for each work task should be assigned.
- A description of the City departments and other parties that will participate in the project, along with their major responsibilities.
- A description of any deviation from established City standards.
- A statement of major assumptions used to prepare the project plan.
- A statement of major risks to the timely and "on-budget" completion of the project.

Adequate planning for large and complex projects like the MPD 3rd District Capital Project often requires considerable time, effort, and cost. In such cases, preparation of a project plan should be funded and managed in a separate front-end planning phase. For example, a City department may want to request budget funding for an entire capital

project when that project has not yet been clearly defined in terms of its functions, features, requirements, or costs. In this case, the department could submit a budget request for the entire project with high-level information on project scope, benefits, deliverables, and preliminary cost and time estimates. The department would also submit an estimate for the funding needed to complete a project plan meeting the adequacy criteria established by DOA-Budget. If the Mayor and Common Council decide to pursue the project, funding could be budgeted and released for the preparation of the project plan, and budgeted but not released for the full implementation project. The necessary architects, engineers, and consultants could then be engaged to develop a project plan under the standards and guidelines established by DOA-Budget. Upon completion, the Mayor and Common Council could use this finalized project plan to decide whether to release funding for the full implementation project.

DOA-Budget should establish and implement a capital project planning and budgeting process consistent with the above requirements. For each proposed project, project plan documents meeting the adequacy criteria established by DOA-Budget should be available to decision-makers before funding is released for project implementation. If material changes are later needed in a project, amended project plan documents should be submitted to the decision-makers for approval.

Recommendation 2: Institute Progress Reporting Standards

In addition to sufficient project planning, active project monitoring is essential. Toward this end, the City needs an effective project progress reporting system for major projects. **The principle objective of effective project progress reporting is to provide timely, meaningful information on the financial and physical completion status of a project against its project plan, budget and schedule.** This reporting should be available frequently throughout the course of the project and following conclusion of the project. Such reporting gives project managers early warning of potential problems requiring action. An effective progress reporting system will indicate whether appropriate and sufficient manpower is being applied, whether work is being completed on time, and whether a delay in a specific task will impact the project.

DOA-Budget should develop standards and guidelines for use by City departments for effective capital project financial and completion status reporting, including at least the following:

- Formal periodic reports in intervals required by management to effectively control and manage capital projects. Such intervals can range from weekly to monthly and are in addition to the frequent status meetings held to resolve day to day scheduling and other issues.
- "Critical path" scheduling techniques to continually identify those tasks that if delayed will affect the overall completion date of the project.
- An executive summary project status report at least monthly containing the following:
  - Current financial and physical completion status,
  - Progress over the last reporting period including problems encountered and how those problems were or will be addressed,
  - Planned activities and accomplishments over the coming reporting period.
- "Roll-up" reporting where project status information is available at various levels of detail for component specific information (example: status of masonry crew work) to a summary of all project components for top management personnel, the Mayor and the Common Council.
- Frequent comparisons of project budget apportioned "to date" versus actual expenditures "to date", and total project budget versus estimated cost at completion.
- Frequent periodic on-site progress examination by City management. Such field visits assure that reported physical completion status and quality of work can be verified on an on-going basis.
- Regular estimates of physical completion percentage versus the percentage of budget expended.
- A direct tie to the project cost accounting and progress billing system. This assures that project billings are easily reconcilable to actual reported project expenditures, change orders, and actual physical progress.
- Directly reconcilable to capital budget line items. This is required in order to make accurate comparison of actual expenditures to the approved capital budget.
- Utilizes the standard American Institute of Architects (AIA) Chart of Accounts for construction projects. This avoids the use of unclear, confusing expenditure line items, which can lead to disputed costs.
- Regularly reconciled to costs reported on the City of Milwaukee's FMIS accounting system. See the section on Financial Accounting and Reporting below.

Recommendation 3: Report Progress on Planning, Budgeting, and Reporting Standards to the Common Council

DOA-Budget should periodically apprise the Common Council of the status of improvements to the capital project planning, budgeting, and reporting processes pursuant to the above Audit Recommendations 1 and 2 to ensure that the needs of the Common Council are adequately addressed.

D. Project Administration and Management

Coordination and cooperation between affected City departments needs improvement for large projects such as the MPD 3rd District Capital Project. Documents indicate on-going contention between City departments during the course of the Project, with no apparent mechanism to resolve problems in a timely manner. Difficulties in interdepartmental coordination and cooperation have likely increased Project cost, but the Audit could not determine the amount of this extra cost.

The construction of the 3rd District Police Station and Data Communications Center benefited from DPW's construction project experience. However, more aggressive DPW management and oversight for large construction projects are needed.

Financial accounting and reporting for the MPD 3rd District Capital Project is inadequate. This makes it impossible to report on the financial status of the Project in a timely and accurate manner.

These weaknesses in Project administration are discussed in detail below.

1) Interdepartmental Coordination and Cooperation

The MPD 3rd District Capital Project involved four City departments. The Milwaukee Police Department (MPD) and the Milwaukee Fire Department (MFD) are the user departments, and the Departments of Public Works (DPW) and City Development (DCD) are the support departments. With four departments participating in the project, the need for close continuing coordination and cooperation was critical. Unfortunately, the Project exhibited a number of instances where this was lacking. Based on this Project,

the Audit concludes that closer coordination and cooperation between City departments is needed on major capital projects.

DPW was not satisfied with DCD coordination on site acquisition. DPW complained to DCD in letters dated November 23, 1998 and March 11, 1999 about DCD staff not attending Project meetings, and not providing sufficient information about the status of site acquisition and relocation efforts. DPW referred these complaints to the Mayor's Office on July 2, 1999. MPD 3rd District Capital Project documents indicate that DCD repeatedly committed to site acquisition closure dates. On some of the parcels these dates were not achieved, delaying the Project. There were no doubt difficulties in acquiring the requisite properties that were beyond the City's control. However, apparent communication gaps between DPW and DCD made matters worse.

MPD asserted that DPW's Project billing practices did not meet its needs. According to MPD, DPW charged salary costs directly to the MPD 3rd District Capital Project account without providing sufficient supporting information on the activities related to those charges. In addition, DPW did not provide explanations for some other charges, such as Procard purchases. Also, MPD indicated that DPW charges were often not timely and that DPW often did not provide sufficient or timely follow-up on MPD inquiries.

The Police Chief sent a letter to DPW on March 12, 2001 stating in part that,

> *"1) We will no longer allow the DPW to charge salaries directly in the Police Department capital accounts…2) If you require funds…please call our Budget Manager…3) The Police Department will not allow any changes to the original scope of the project without my express approval…4) The Police Department will no longer absorb increased costs due to mistakes on the part of vendors…"*

According to MPD, the two departments met to discuss the above issues and some improvements were made, but MPD continued to be dissatisfied with DPW billing practices.

MPD appears to have limited DPW's involvement in the MPD 3rd District Capital Project to less than what is called for in City ordinances. Ordinance chapter 309-1 assigns responsibility to DPW for building construction and municipal communications, stating in part that,

> *"The department of public works shall be responsible for all matters relating to the design, construction, maintenance and operation of the physical properties of the city of Milwaukee including…public buildings…municipal communications."*
> Also, ordinance chapter 7-10 entitled, Fire and Police Alarm Systems states that,
> *"The department of public works shall have entire control and management of the construction, maintenance and repair work of the fire and police alarm systems, and all the records, apparatus, instruments, wires, cables, batteries, telephone and signal stations whatsoever connected with or relating to such construction, maintenance and repair work in the city of Milwaukee; provided that …the chief of police shall have charge of the operation, the chief operator and operators of the police alarm switchboard, and of the operation, radio engineer, radio operators and radio electrical mechanics of the police department."*

Consistent with its ordinance responsibilities, and to its credit, DPW attempted to take the lead for communication systems and wrote MPD on June 17, 1999 stating that,

> *"Proposals will be requested as soon as possible to obtain the services of a communications consultant to work with the project team to make a recommendation concerning the software and hardware needs for the communications/data center."*

MPD responded to DPW on July 7, 1999 stating that,

> *"…the Police Department does not at this time request the assistance of DPW in developing RFPs for communications or software consultants. Any consultants, project managers or contractors hired in regards to Police Department information or communication systems will report directly (and only) to the Chief of Police. Identifying and implementing information systems is more a matter of changing business processes than one of 'bricks and mortar.' As a result, contractors must be directly accountable to the Police Department…"*

DPW handled installation of the communications infrastructure cabling and SONET System Wide Area Network and participated in the acquisition of the telephone and CAD systems. However, MPD retained overall control and management of the technology aspects of the project.

MPD and MFD have apparently not coordinated well on the MPD 3rd District Capital Project technology component. MFD indicates that MPD controlled the design of the

new building and provided MFD with less space and functionality than MFD requested. Also, MPD and MFD are currently installing separate Computer Aided Dispatch (CAD) and Records Management (RMS) Systems. The MPD system is currently estimated at about $9.3 million and the MFD system at about $6.5 million for a total of $15.8 million. In a report to the Mayor's Office on October 5, 2001, MFD indicates that the two departments first attempted to produce a consolidated Request for Proposals (RFP) for a shared, integrated CAD and RMS system. Development of this joint RFP was under the control of MPD and its technology consultant. MFD felt that its unique technology needs were not being adequately addressed in the consolidated RFP being developed by MPD. MPD abandoned the consolidated RFP and instead issued a separate RFP for a police CAD and RMS system. MFD followed with its own RFP.

The Department of Administration Information and Technology Management Division (DOA-ITMD) tried unsuccessfully to move the two departments back toward considering a shared CAD and RMS system. DOA-ITMD asserts that any benefits derived by separate systems are outweighed by the financial and technological benefits that would have been achieved had the departments implemented an integrated, shared system.

Recommendation 4: Revise Ordinances, Establish Citywide Standards and Assign Responsibilities Accordingly

City departments whose needs drive a capital project should have overall responsibility and accountability for such projects. User departments are in the best position to define project functions, features, and requirements, and to control project budgets. Therefore, these user departments should assume overall responsibility for project costs. However, there is also a need for the consistent application of City standards in capital projects. Common Council ordinances and policies assign to specific expert departments certain responsibilities for building construction and information technology projects.

As noted above, **City ordinances assign to DPW full responsibility for the design and construction of City buildings and municipal communication systems. However, the Audit indicates that DPW is not assuming these ordinance responsibilities in capital projects, but instead has assumed more of a supporting role to the user departments.** In the audited Project there was no indication that DPW imposed standards on the design and construction of the new building or the communication

system. A lack of consistently applied standards in capital projects could have adverse operational and cost consequences for the City.

DOA is assigned the responsibility for imposing standards for City information technology. City Ordinance Chapter 320-31 created an Information Policy Committee to,

> *"Formulate public policy and guidelines concerning electronic information that deal with its access, use, documentation, integration, sale, distribution, security and related issues…"* Information Systems Management Policy Guidelines adopted by the Information Policy Committee in 1996 state that, *"The Department of Administration shall be responsible for the formulation of those standards and administrative rules and regulations required to administer and enforce the policy guidelines adopted by the Information Policy Committee…"*

The Common Council should consider revising City ordinances to give user departments overall control over their capital projects, while still ensuring the consistent application of City standards. Ordinances could be revised to:

- Reassign overall responsibility and control for capital projects to the sponsoring user City department.
- Assign DPW responsibility for establishing and monitoring public works standards for capital projects, similar to DOA's role in information technology projects. Such standards would include space standards for offices and similar workspaces, quality standards for construction design and materials, etc. User departments should be required to disclose any deviation from these standards in the project plan documents submitted to decision-makers, pursuant to Audit Recommendation 1.
- Retain DPW responsibility for public works bid letting, code compliance, material and labor specification and testing, etc.

The capital project guidelines developed by DOA-Budget for Audit Recommendation 1 should promote the proper use of DPW, DOA-ITMD, and other City department resources in conformance with City ordinances.

Recommendation 5: Prepare Memorandum of Understanding

To improve coordination and cooperation between City departments on major projects, City departments should consider using a written Memorandum of Understanding that covers the assignment of responsibilities, process and procedure, deliverables, and schedule. An interdepartmental Memorandum of Understanding should be completed prior to the start of a project, covering at least the following:

- Assign responsibilities for each major activity clearly in writing, including responsibilities for change order approval and processing. This will lessen the need for "mid-course" changes in project direction and management.
- Specify documentation needed to support project billing by City departments and outside contractors.
- Develop a formal method of dispute resolution between all parties. A dispute resolution process should minimize conflicts and delays associated with disagreements occurring during a project.

2) DPW Construction Management and Oversight

Based on the MPD 3rd District Capital Project, the Audit concludes that DPW needs to employ a more aggressive capital project management and support approach, including contractor oversight.

DPW handled all bidding and contracting for new building construction. DPW also handled contractor payment and change order processing. To its credit, DPW engaged outside construction management assistance on this large, complex and unique MPD 3rd District Capital Project. DPW developed a detailed contract with key Project management responsibilities assigned to the outside construction management company. However, DPW failed to exercise sufficient oversight of the construction manager. The Audit indicates that the construction manager did not perform certain services required in its contract, and DPW did not enforce performance.

As required in its contract, the construction manager reviewed and commented on the construction documents prepared by the architect. However, there is no evidence that the construction manager formally reported the results of its reviews in a Constructability Review Report prior to bidding, as required in section III A 1 a (4) (b) of its contract. There is no evidence that the construction manager provided the monthly status reports

with percentage of completion, as required in section III A 1 b (9) (a) of its contract. There is no evidence that the construction manager performed some of the change order services required in section III A 1 b (4) (a) of its contract.

Cost estimates prepared by DPW and its outside construction manager for the new building were significantly lower than actual cost, as indicated by Exhibit 4. This Exhibit compares the first cost estimate for the combined facility at 49th and Lisbon Avenue (April 1998) with the actual cost determined by the Audit earlier this year.

Exhibit 4: Comparison of New Building Estimates and Actual Costs ($ millions)

Date	Source	Construction Cost	Other Cost	Total Cost
Apr 98	Estimate by DPW and its consultant	$16.4	$0.5	$16.9
Dec 98	Estimate by DPW consultant	$18.5	$2.7	$21.2
Sep 99	Final pre-construction bid estimate by DPW consultant	$19.8	$2.8	$22.6
Mar 03	Actual new building cost including change orders	$23.6	$5.2	$28.8

In contrast to the cost estimates, the Audit consultant found that the architectural design plans for the new building were of high quality, and the total cost of construction change orders was well within industry standards. Change orders are generally considered acceptable when held to within 10 percent of the original bid. Change orders on the new building added $1,212,453, or 5.4 percent. Also, the cost of design errors and omissions was minor. Change orders due to design errors cost $11,624, and design omissions accounted for $215,208, including $42,442 because design plans were not fully complete when DPW let bids.

There is little indication that the construction manager evaluated the validity of the change orders, as required by section III A 1 b (4) (a) of its contract with DPW. There is also little indication that the construction manager negotiated change orders for maximum City benefit, as required by section III A 1 b (4) (a) of its contract. The contract required the construction manager to *"make recommendations concerning the need for the change, a determination as to whether the request is contained within existing contracts…"* Project files indicate that the architect, not the construction manager, reviewed and approved the details of proposed changes, which were then grouped into the larger change orders that were approved and issued by DPW. As

happened in this Project, design errors and omissions can result in change orders. Therefore, it is not sufficient to rely primarily on the architect to review and approve the change orders.

There is no evidence that the construction manager or DPW performed an analysis to determine the responsibility for causing the change orders. Had this been done, the architect could have been held accountable for the $11,624 in design errors and approximately $21,500 in change order premiums associated with the design omissions.

Project files did not include an owner's (City) cost estimate for the change orders, which is usually prepared prior to the contractor's estimate. There is no documentation indicating that the construction manager provided estimates for all change orders, as required by section III A 1 b (4) (a) of its contract with DPW. Such estimates are useful for negotiating change order work with contractors.

DPW bid the project too early, before site acquisition was concluded. DPW scheduled bids for October 1999, for a start of construction in November 1999. When bids were let, site acquisition was not complete, and the construction documents were not finalized.

As mentioned above, DCD repeatedly committed to site availability dates that were not achieved for some parcels. DPW proceeded to award the construction contract despite its serious reservations concerning site availability and the effect that delays could have on the MPD 3rd District Capital Project.

The construction general contractor would not proceed until the site was fully available, and the start of construction was delayed four months until April 2000. Construction contractors claimed damages of $227,000, which DPW denied. However, the delay did increase the cost of construction management, since the construction manager was paid during the delay.

According to the Audit consultant, the construction general contractor structured its billings to advance payments faster than was warranted based on construction progress. This is apparently not uncommon, but increases City risks. The Audit consultant found that the general contractor itemized its bid into a Schedule of Values, against which payments were claimed. The Schedule of Values included items labeled Mobilization and Miscellaneous totaling $596,716. The general contractor drew $520,343 against

these line items by July 2000, very early in construction. Mobilization should be used only for the cost of moving heavy equipment to the job site, where a Demobilization charge would also be warranted. The general contractor's Mobilization charge was extremely large, potentially leading to an unwarranted advance in contractor payments. The Audit consultant found another $208,000 in Schedule of Values line items that were also potentially used to advance contractor payments.

If the City had to terminate a contractor for cause during the course of a project, premature contract payments could increase City damages. No contractor should be permitted to draw payments earlier than warranted by the actual status of construction.

Recommendation 6: Strengthen Project Management and Oversight

The Audit indicates that DPW should strengthen project management and oversight in the following areas:

- Improve contractor oversight. DPW should implement effective contract monitoring procedures to identify and resolve contractor performance problems in a timely manner. This is essential to adequately control project costs and work schedules.
  - Contracts should be strictly enforced. Decisions to waive or delegate contract requirements and responsibilities should be justified and documented in contract amendments or other appropriate project documents.
  - Contractors should be required to meet the progress reporting standards developed by DOA-Budget pursuant to Audit Recommendation 2.
  - Contractor oversight should be professionally aggressive. Problems should be identified and confronted early. Contractor delays should be challenged. Contractors should be required to drawdown profit and overhead throughout the project, and not be permitted to advance payments with unsubstantiated mobilization or miscellaneous charges.
- Improve construction project administration.
  - Construction contracts should not be let whenever there is uncertainty concerning the affected project site. Starting work before a project site is fully available can lead to extra project costs.
  - Change order processing procedures should be documented and included in contracts. The assignment of change order responsibilities to DPW and other City user departments could be documented in a Project Memorandum of Understanding pursuant to Audit Recommendation 5.

- Change order requests should indicate the impact on the project work schedule and completion date.
- Change orders should be handled in strict accordance with the documented procedures. Change order work should not be undertaken without prior City approval. If there is an urgent need to start work before all the paper work is available, prior city authorization should still be obtained and documented. Such exception processing should be addressed in the documented procedures.
- Major capital projects should include a thorough "user acceptance" process to ensure that all project systems and features function properly before the project is considered completed. This is also referred to as a "commissioning" process.

➢ Improve cost estimation. DPW should implement procedures to monitor, evaluate, and improve the reliability of its cost estimates. This should include routine analysis of estimates in relation to actual costs.

➢ Implement a construction management training plan. DPW should implement a training plan to provide its staff with the skills needed to manage large construction projects, including training in contractor oversight, contract administration, and cost estimation.

3) Financial Accounting and Reporting

Neither MPD nor DPW could provide a timely auditable report on the financial status of the overall Project, including the building and technology components. This made it very difficult to determine the cost of each Project component.

MPD has spreadsheets on Project costs, but the costs listed for construction contracts generally do not agree with amounts reported in DPW spreadsheets or in the City's automated accounting system known as the Financial Management Information System (FMIS). DPW has spreadsheets on Project costs, but they are incomplete and also do not agree with FMIS. The primary DPW Project spreadsheet (entitled 3rd District Police Station Communications Data Center Cost Summary) has not been updated since September 2001 and does not include costs for the Radio Shop.

MPD and DPW did not use the FMIS appropriately to account for the Project. FMIS subaccounts were not used consistently to report expenditures related to each component

within the overall capital account. Five subaccounts were established in FMIS for the building, emergency generators, communication and data, SONET System, and Radio shop. Project expenditures were not consistently posted to these subaccounts, and at the time of the Audit $7.3 million was posted to the Project parent account rather than any of the subaccounts. These expenditures were not readily attributable to specific Project components.

Incomplete and inconsistent Project accounting impacts the City's ability to properly report Project assets in the City's financial statements. (CAFR).

Audit Recommendation 2 proposes that DOA-Budget institute progress reporting standards and guidelines for capital projects, including financial accounting and reporting standards for the proper and effective use of the City FMIS accounting system. The Office of the Comptroller is available to advise DOA-Budget and City departments on capital project accounting and financial reporting.

APPENDIX

The Third District Police Station and Data/Communications Center
2333 North 49th Street

Radio Shop – Alternate Dispatch Site
4729 W. Vliet Street

Police Administration Building – Emergency Generators
749 W. State Street

Milwaukee Police Department's description of value added to MPD by the Data-Communications Center Project component:

Wide Area Network

The Department's old wide-area network was slow and unreliable. Connections were frequently lost and the system required a great deal of maintenance. The new Sonet based network is redundant to critical facilities and provides 64 times the capacity of the old network.

The importance of high reliability can not be overstated. Once all of the new systems are complete, all of the voice and data communications within the Police and Fire Departments, including radio communications, will utilize this network. The Department routes all internal telephone calls over this network saving the expense of a private carrier. The new network has not been down since it was commissioned and provides the proper foundation for public safety communications. The rest of the City also benefits from the reliability of this network.

It should be noted that the Police and Fire Departments utilize exactly ½ of the capacity of the new network. The other ½ is utilized by other City Departments who contributed nothing toward the purchase of the equipment or installation. The Police Department has funded a city-wide network through this project that will serve the City extremely well for the foreseeable future.

Administrative Telephones

The Department has successfully changed from a patchwork of several aging and small administrative telephone systems to a single system. Operations have become more efficient since the operation of the phones at all work locations is consistent. Service to the citizens is more reliable and the quality of the connection is very good. Additionally, the system is digital rather than analog and is capable of Voice over IP telephony. This project replaced the telephones in the Fire Department and Police Department as well as a number of phones in the Health and Water Departments. None of the other Departments contributed toward the purchase of the system. Once again a City-wide system was funded out of this Police Department project.

911 System & Alternate Dispatch Facility

The new 911 system will also route 911 calls internally between the primary and alternate dispatch sites for both the Police and Fire Departments. The transfer of 911 calls between Police and Fire, such as callers seeking Fire or EMS service, previously required a tandem transfer at the SBC switching office. This causes the Automatic Number Identification (ANI) and Automatic Location Identification (ALI) information to be re-bid from SBC. Each of these transfers and information dips costs the City money. The new system eliminates these charges. Additionally, it also allows both Police and Fire to use any or all of the primary and alternate site positions simultaneously. Currently, a switch is thrown and all 911 calls are routed via non-911 trunks to the alternate dispatch site. All call taking moves at one time, immediately upon the switch being thrown. In the event of an emergency it is highly unlikely that there can be a staff to answer the calls as soon as the switch is thrown. As a result, response to 911 will be

degraded when it is most needed. The new system requires no such switch. Routing is accomplished based on the operators who are logged on. Efficient call delivery is maintained regardless of the call taking positions being utilized.

The old system had no 911 service at the alternate site. Since there is no PSAP capable of absorbing our call volume, the loss of our primary site would mean the loss of 911 service in the City without an alternate dispatch site. (We do function as the backup PSAP for the Milwaukee County Sheriff's Department.) While SBC to date does not provide 911 calls in a digital format the equipment in place is ready to accept them. This will speed the processing of emergency calls to the 911 center.

Furthermore, the system in place is also ready to receive wireless 911 data. This information, necessary to plot the location of cellular 911 callers on a map will provide a level of service to the public that few jurisdictions in the State are prepared to offer.

The renovation of the radio shop provided the necessary space and facilities for the alternate dispatch site for both the Fire and Police Departments. The alternate dispatch facility is currently housed in the old District Three Station building and could not remain there.

Many of the vehicles requiring radio installations and service are becoming larger and more complex. Much of the work on large vehicles had to be done out of doors because of the limitations of the old facility. The lack of installation space led to a great deal of valuable technician time being wasted shuffling vehicles in and out of the poorly lighted aisles of the garage. There was also inadequate bench space for the repair of an ever more complicated and wide ranging array of radio equipment. Storage of parts and supplies necessary to keep all of these systems functioning was also extremely inefficient.

Computer Aided Dispatch (CAD)

The old mainframe based CAD served the City well for the past 13 years. It was highly customized for Milwaukee and has not been updated in years. The new CAD offers a number of improvements. Call entry will be enhanced due to the tactical mapping application that is integrated into the system. The ability for dispatchers to see on the tactical map the location of units as well as calls for service, pending and in-progress, will enhance officer safety and improve resource management. The map will also display the location of vehicles in real time once the new radio system is installed. This will greatly officer safety during some of the most dangerous events. i.e. pursuits, requests for assistance, etc.

A highly redundant system architecture will prevent unexpected loss of dispatch capability. Currently, CAD must be taken off line for certain maintenance procedures and has unexpectedly crashed on a number of occasions. The architecture will also allow for a significant increase in the number of real-time monitoring positions. Currently, only one such position exists within each District and many work locations have no ability to do real-time monitoring. This will again enhance the Department's ability to more effectively manage its resources.

A complete suite of management tools, something not purchased with the old CAD, as well as the ability to quickly create ad hoc reports will allow for much greater access to the information contained in the system.

While not strictly a part of the CAD, new Mobile Data Computers, MDCs, have been acquired.

Records Management System (RMS)

The Department has experienced significant difficulty in responding to internal and external requests for data due to the configuration of the current RMS, a mainframe based system that has not been kept current. The outdated operating system and database software is inadequate for modern information storage and retrieval, let alone information sharing. Part of the reason for this is the custom coding by and/or for the Department. For this reason the Department sought to utilize Commercial Off the Shelf, COTS, software to the greatest extent possible. Customizations were kept to a minimum. In addition, only those customizations that vendors guaranteed they would incorporate in future baseline versions of their system were allowed.

Lastly, having current versions of software supported by a vendor organization will help to reduce our need for highly specialized training and reduce reliance upon key employees. The continued access to data is also an important benefit of COTS software. Currently the Department is unable to fully utilize data in several databases. While some of these stand-alone databases are now being worked on, at least one is in all likelihood beyond repair. The database was programmed by an ITMD employee who suffered a disabling health condition and we have been unable to secure the services of anyone who can reverse engineer its structure.

The records management system will consolidate a number of stand-alone databases now being maintained throughout the Department. This will result in the elimination of a great deal of redundant data entry while allowing much greater access to data within the Department. The system will move reports digitally for approval and they will only need to be printed on demand. Creation and storage of paper incident reports will be virtually eliminated.

The system will also allow officers to file incident reports, accident reports and citations from the field, as well as to retrieve information in the system from the field. Information entered into the system is immediately available throughout the system. Crime trends can be explored and strategies developed without waiting for the complete report approval process to take place. (Extending the system to the field in a meaningful way will require much greater wireless capacity than the City currently has. These services are now being offered at rates that make City investment in the necessary infrastructure a poor investment.) Reducing the need for officers to come into the station and providing greater access to the data entered will speed the progress of investigations and improve their effectiveness.

Imaging System

Document imaging is being used to make paper documents readily available without having multiple work locations spend time indexing and filing copies of these reports. This technology is being used to bridge the paper to paperless gap in a meaningful way. This technology also allows for very fast, structured access to more documents than could possibly be stored at any work location. This will enhance the investigative ability of the Department as well as reducing the clerical time necessary to

maintain our records. The imaging system is also being used to archive our citations and the images captured by our digital cameras. In the past, photographs were only available by developing the negatives and printing pictures as needed. The new system will allow authorized personnel access to a wide range of photographic records from their work location. With sufficient wireless capacity these records will be available in the field.

The new RMS also provides the means for the Department to move to more sophisticated crime reporting methods. The system will be Wisconsin Incident Based Reporting System, WIBRS, compliant. Furthermore, hardware and software to facilitate the exchange of data with other systems and to the public is included. The ability to export data to authorized sources will be greatly enhanced by the use of these modern database and communications protocols.

Automated Fingerprint Identification System (AFIS)

The old AFIS was technically obsolete and physically incapable of being repaired any longer. The new system provided the Department with modern software and enhanced matching algorithms that have led to much faster entry of latent prints into the system and hundreds of identifications that would not have been possible with the old system. In 2002 we experienced a 271% increase in the number of latent identifications. Since the new system was installed in March of 2002 an additional increase is expected this year.

The new system also allows the Department to capture and search against palm-prints. The Department had captured palm-prints until the time the City-County booking agreement was implemented however there was never a practical method of searching this database without a named suspect. We have identified dozens of criminal suspects utilizing palm-prints since the implementation of the new AFIS.

The Department was careful to coordinate with the State of Wisconsin and has the same AFIS system the State recently acquired. This will allow for seamless operation between the systems and facilitate identifications of suspects not contained within the City's database. (The Department worked closely with the State and was to have received State financed equipment. Due to budget constraints at the State level equipment for MPD was cut. Only at this point did the Department seek City financing for this critical law enforcement service.)

The system also includes a fast identification component that utilizes a one or two finger scan from a small optical device. The Department will be field-testing two mobile units that will allow for the searching of the entire fingerprint database from the field. Fixed devices located in the booking rooms at all District stations quickly identify to non-technicians the true identity of persons in custody. This information is then provided to the Department's RMS in order to improve the accuracy and speed of the booking process. This avoids the incorrect completion of reports and records with false names and is viewed as an ever more important tool in the fight against identity theft.

Being able to accurately identify offenders on the street will prevent innocent citizens from having the citations and arrests of others entered onto their record. This in turn prevents the issuance of arrest warrants, denial of employment and other actions being taken against innocent citizens. Not having to arrest and convey suspects to a District Station, book them, cause a technician to manually compare the prints taken and

make an identification will save a great deal of patrol time. It also reduces the City's liability as fewer people will be physically taken into custody. (As of this writing funding for field identification units beyond the pilot project has not been secured. A request included for the 2004 budget is likely going to be cut due to budget constraints.)

Digital Mugshot and Fingerprint Systems

In 2001 digital mugshot and livescan fingerprinting systems were implemented as part of the booking process. The mugshot system provides decentralized access to prisoner photos as well as the ability to quickly assemble and print legally valid photograph line-ups for witnesses to view. The system can search on demographic features as well as recorded scars, marks and tattoos. This has already increased the investigative effectiveness of the Department. Search results can be shown to victims at various work locations throughout the City or for investigative purposes. Another feature of the system is the ability to easily create effective composite drawings of suspects from victim descriptions.

The system is also capable of facial recognition searches of the mugshot database. It can NOT do live, real-time searches as it is presently configured however we can search the composites created with the system as well as images that are input into the system. These images can be from scanned photographs or images captured from video surveillance systems. There has been some controversy about the effectiveness, even the constitutionality of live, real-time searches however the usefulness of a search tool that can access our mugshot database is not in question.

The livescan fingerprint machines allow for the rapid input of prisoner fingerprints and aid in the timely identification of arrestees. The system saves time compared to inking fingers, printing cards, manually comparing them to other printed cards and documenting the results. The identifications occur more quickly and are passed on to the State in digital format, rather than on paper.

Digital Trunked Radio System

The current radio system has many components that are some 35 years old. It is an analog system that does not have the capability to encrypt sensitive transmissions, does not efficiently use the limited radio spectrum available to the City and does not provide and Global Positioning data for use by the CAD system.

The new system will ensure voice and basic data communications for the entire city. The infrastructure of the new system has been sized to accommodate the needs of all city departments, not just the police department. Other user Departments will need to purchase only the radio equipment for their personnel/vehicles in order to utilize the new system. Furthermore, the Police Department has applied for grant funding that will assist in the acquisition of this equipment.

The new system is compliant with all FCC narrowbanding rules and provides for several levels of interoperability. The system maximizes use of frequency not only by providing 4 simultaneous voice/data paths per frequency but by utilizing any available frequency for needed communications. The use of talk groups allows user departments to create logical work oriented communication paths. They will no longer be restricted by having 1 communication path per frequency. System design will utilize 700 mhz

frequencies in addition to 800 mhz. This allows the City access to a large pool of 700 mhz frequency in the relatively near future while using currently available 800 mhz frequency. It also promotes the interoperability of the system with other users who may use 700 or 800 mhz frequencies.

All users of the new system will be able to talk to each other based on simple programming rather than physical system connections that currently must be custom designed and built. Initial interoperability will be provided by the radio consoles included with the system. By the end of 2003 the radio systems of all City departments will be "patched" to each other using these consoles. This will allow the use of all current equipment to the greatest benefit of the City and will facilitate the graceful transition from old systems to the new. Later, the Open Sky infrastructure will facilitate additional interoperability features. The City system will be able to connect to virtually any radio system.

New radios have both voice and data capability as well as integrated GPS. This means that it will no longer be necessary to buy a mobile radio, separate radio modem and separate GPS unit for each vehicle. The city will realize a savings in the future purchase of equipment. The GPS feature will provide the data necessary for the CAD to display the real-time location of squads and eventually officers on the street. This will facilitate the most efficient dispatching possible and units that are actually close to emergency calls can be dispatched rather than units that are simply assigned to areas close to these calls but may actually be quite a distance away. The benefits to officer safety and efficiency can not be overstated.

The system also features a mobile repeater functionality, V-Tach. This technology provides excellent in-building coverage near the V-Tach. They can also extend the practical range of the system well into the buildings even on the fringes of the system coverage. In the event it is necessary, a V-Tach equipped vehicle can be used to establish a radio system when access to the City infrastructure is not available. The Fire Department was particularly impressed with the level of in-building coverage this technology provided during the proposal evaluation.

The system design provides for easy and very affordable expansion. This will be particularly beneficial to the City as we work to obtain communication interoperability moneys.

Additionally, the system features encrypted transmissions with the same voice quality as clear transmissions. Encrypted transmissions will reduce reliance upon cellular telephone technology for private conversations. Another added feature is the identification of the individual radio that is broadcasting. This allows for over the air programming and other time saving functions of the new system.

AUDIT RESPONSES

City of Milwaukee

Police Department

Arthur L. Jone
Chief of Police

October 7, 2003

Mr. W. Martin Morics
City Comptroller
200 East Wells Street
Milwaukee, WI 53202

Dear Mr. Morics:

The Third District Capital project was a long process, involving staff in the Police Department, Fire Department, the Department of Administration and the Department of Public Works. The end result is a beautiful building that enhances its neighborhood and will serve the city's public safety objectives for many years to come. The technology purchased has and will replace failing technology and facilitate significant improvements in public safety operations. This technology also benefits the City by providing a SONET network and telephone system for use by other City Departments.

At this point in time, it is difficult to go back over the nine- year period involved and identify all the events that shaped the project. Many of the staff involved are now retired. Over this long period of time, I think we can all agree that it was to be expected that issues would arise that were beyond the scope of the original project. Many of these issues resulted from decisions beyond our control, such as the site selection.

In retrospect, it seems fairly clear that separate projects should have been defined. We agree, as stated in the report, that the City's capital budgeting and reporting processes need to be strengthened. The Police Department recognizes that these changes are indicated. We welcome many of the suggestions in the report.

Hopefully, the lessons learned will improve the capital construction process for future projects.

Sincerely,

ARTHUR L. JONES
CHIEF OF POLICE

Police Administration Building, 749 West State Street, Post Office Box 531, Milwaukee, Wisconsin 53201-0531 (414) 933-4444
Web Site: http://www.milw-police.org

City of Milwaukee

Department of Public Works
Operations Division
Buildings and Fleet Services

Mariano A. Schifalacqua
Commissioner of Public Works

James P. Purko
Director of Operations

Venu J. Gupta
Buildings & Fleet Services Director

October 7, 2003

Mr. W. Martin Morics
City Comptroller
Room 404 City Hall
Milwaukee, Wisconsin

Attention: Mr. Michael Daun

Dear Mr. Morics:

Subject: Audit of Milwaukee Police Department (MPD) #3 District Capital Project

The Department of Public Works (DPW) is in general agreement with many of the recommendations and conclusions presented in the audit of the MPD #3 District Project. While the report lists a number of process concerns, we believe that this unique and challenging project represents a high quality product delivered within a reasonable time frame and cost.

DPW agrees that a project of this size and scope would have been better served by having a solid Memorandum of Understanding (MOU) with clear definition and understanding of responsibilities of various agencies. Projects of this scope, especially involving multiple agencies, are generally guided by a MOU. DPW has utilized MOUs for such projects as the Riverwalk, 6th Street Viaduct, Park East demolition, Canal Street extension, and numerous other projects involving the State, County, and the Department of City Development. A MOU, adopted by the Common Council, also would have resolved many of the issues raised in this audit and eliminated the need for ordinance revisions.

DPW has a robust contract management system for the many paving, building, and utility capital projects it is responsible for. This includes complete specifications, detail plans and drawings, through construction management and on-site inspection. This work is generally performed by DPW employees. Given the complexity and size of this project, DPW hired an outside consultant to manage and inspect the MPD #3 District Project. While the consultant was responsible contractually for all aspects of contract management, based on the audit recommendation, DPW will, in the future, assign a project engineer to oversee the contractual activities on site to assure contract compliance.

DPW offers the following specific comments on the audit recommendations:

1. Formalize project planning and budget proposal requirements.

   We are in agreement with this recommendation and would be willing to work with the Department of Administration on project planning and budget requirements.

2. Institute project reporting standards.

   We have a reporting process, but are willing to work with the Department of Administration to improve the process.

3. Report progress on project planning, budgeting, and reporting standards to the Common Council.

Reporting standards may be helpful to provide the Common Council with information on project progress, on projects of major scale, or as requested by the Common Council. Providing the Common Council with progress reports on all projects regardless of size and cost would provide too much information to be usable.

4. Revise City Ordinances, establish City-wide standards, and assign responsibility accordingly.

DPW believes that current ordinances are adequate for most Capital projects. We believe that for complex multi-agency projects, a MOU, approved by the Common Council, is the best method to achieve the goals of this audit.

5. Prepare Memorandum of Understanding prior to project start.

A written Memorandum of Understanding is essential in control and efficiency of projects of this magnitude and scope. However, on some large and complicated projects such as 3rd District/Data Communication Center, the complexity of the project requires some flexibility. Rapidly changing technology, site selection, and building configuration decisions may require making adjustments to the memorandum. These changes, of course, should be in writing.

6. Strengthen project management.

DPW agrees that there were some project management lessons to be learned from the audit. Given the complexity and size of this project, DPW hired an outside consultant to manage and inspect the MPD #3 District Project. While the consultant was responsible contractually for all aspects of contract management, based on the audit recommendation, DPW will, in the future, assign a project engineer to oversee the contractual activities on site to assure contract compliance.

The building portion of the project was completed primarily within estimate and schedule, except for scope changes and acquisition delays. As stated in the audit, the building project was completed well within industry standards even with the Open Records move.

There may have been agreements and methods used in control of the project that were not completely in agreement with contract documents. These agreements worked well on this project, but these agreements and methods should have been formalized in contract amendments. These items will be formalized by DPW on future projects of this scope and duration in order to preserve a better history of the project.

DPW has made a strong attempt to appropriately account for the project costs over the life of this project, using both internal spreadsheets and FMIS. The 3rd District Project predates the current FMIS by several years and, therefore, DPW has continued to use spreadsheets created prior to implementation of the new FMIS as management documents for this project.

The audit states that FMIS subaccounts were not used consistently to report expenditures. DPW has charged the vast majority of expenditures for the 3rd District, PL12080500, to the subaccounts established in that project.

To date, approximately $45 million in total expenditures have been posted to this project. The audit references approximately $7 million in expenditures posted to the Parent Account and not Subaccounts. Of this $7 million, only about $100,000 were expenditures posted by DPW staff to the

Parent Account. The remaining $38 million of expenditures to date have been posted by DPW staff to the various Subaccounts.

Also attached are some comments by DPW regarding "Scheduling", "planning and Budget Estimates", and "Administration".

DPW appreciates the opportunity to work with your staff to improve the Capital Project management process.

Sincerely,

Mariano Schifalacqua

MARIANO A. SCHIFALACQUA
Commissioner of Public Works

Attachment

VG/mbm

Attachment

SCHEDULE

The completion schedule for this project changed considerably during its duration. However, once a site had been selected and the program was completed the dates for construction were set at start construction October 1999, and complete construction April, 2001. The technology portion of the project was to be completed 2 months after completion of the building. Construction of the building was not completed until December, 2001 which was 8 months behind schedule. Considering the late start of construction and the delay caused by the late decision to move Open Records to the new facility, the December, 2001 completion date is justified. The technology portion of the project is estimated to be completed in 2004.

At the very beginning of the design process a very aggressive construction schedule was determined and a fall 1999 bid date was the goal set by the schedule. It was felt that fall bids would be financially more favorable, than waiting for early 2000. Later bids would draw fewer bids and less competitive bids due to contractors 2000 workloads being filled as time went by. Inflation would also raise later bids. A fall bid date would allow for demolition and foundation work to be completed during the fall and early winter months. This would assure an early closure of the building in 2000 and allow for interior finishes to be completed during the winter of 2000 – 2001.

At a November 3, 1999 meeting with Zimmerman Design Group (ZDG)/architect, Grunau Project Development (GPD)/construction manager and DPW the availability of the site was discussed and at the time Milwaukee Marble and Binz Garage were scheduled to be out by December 1, 1999. After the meeting DPW was informed that Milwaukee Marbel would still be on site after December 1, 1999. This resulted in the significant delay in start of construction.

PLANNING AND BUDGET ESTIMATES

Programming for the construction of a new MPD #3 District Station began in 1994. At that time a preliminary program was established. The preliminary Program called for a one-story structure with a surface parking lot. There was no specific site. DPW estimated it's cost at $8.77 million. DPW also estimated the cost to remodel the old MPD #3 for a data-comm center. This was estimated at $12 million. These two estimates added together totaled $20.8 million.

In 1997 preliminary programming was set for a new facility housing both the MPD #3 District Station and the data-comm function. No specific site was available, but a consultant provided this estimate for this facility while the estimate for data-comm equipment was provided by the MPD. This estimate totaled $31.78 million.

In 1999 a new combined MPD #3 District Station and data-comm facility was estimated including a parking structure and the cost for data-comm equipment. This estimate was based on 90% complete construction documents for a specific site. This proposal was provided by our consultant and was estimated at $37.29 million. Of that estimate $21.33 million was for the construction of the District Station/data-comm building and the parking structure. It also included an $11.4 million data-comm equipment estimate from MPD.

Bids for the construction of the combined facility were received later in 1999 and bids were $2.6 million over estimate. The bids were reviewed by GPD. GPD reported higher than estimate costs in precast concrete (heavy market demand), emergency generators (heavy market demand/Y2K) and electrical (complexity of alarm systems, tech systems, security systems).

During construction the only major construction related changes were for over-exaction costing about$.2 million and the correction of air conditioning problems estimated at $.2 million. This raised the overall cost to $40.4 million.

Major overall project cost increase after this was not building construction or infrastructure related.

ADMINISTRATION

Several concerns were raised in the audit concerning the administration of the contracts involved in the design and construction of the 3rd District/Comm-date facility. Those concerns are addressed in the following discussions.

The GPD contract called for GPD to examine the design documents and make recommendations during the design process and to prepare a constructability review report based on such reviews prior to documents being issued for bids.

The GPD was not selected as the Construction Manager until July, 1999 and the documents were issued for bid, September, 1999 and finalized even before that. The timing of these two events did not give GPD much time to make an affective constructablilty review. During a meeting to review the 90% complete plans, GPD did discuss the construction documents, but a formal report was never issued. On future projects requiring construction management the construction manager needs to be on board earlier in the process to allow for a complete constructability review.

C.D. Smith (CDS) submitted a schedule of construction values/contractor prior to construction and it was reviewed by GPD and was determined to be reasonable and was accepted. The scope of the mobilization pay item was considered to be broader that just moving major pieces of construction equipment on to the site.

The Change Order Process was discussed in detail at a meeting on November 3, 1999. ZDG, GPD and DPW attended the meeting. At this meeting the change order process was modified at the request of the DPW. The terminology to be used in place of change order was Design Clarification. The process to be used was discussed at length at this meeting and everyone's responsibilities were outlined.

The audit indicates that GPD appeared to not evaluate "change orders" (Design Clarifications), but only forward them to DPW when received from ZDG. ZDG had a representative that worked with GPD at the construction site. GPD received the Design Clarifications for the General Contractor and after evaluating them would forward them on to ZDG. In reality ZDG and GPD representatives on the construction site worked in concert on all Design Clarifications. By the time ZDG forwarded them to GPD, the two parties wherein agreement on the Design Clarification including the cost/no cost of clarification.

The audit indicates that our construction manager, Grunau Project Development (GPD), did not provide proper status reporting. GPD utilized a lap top computer to record daily on-site activities on the construction of the project. Also, on-site project construction meetings were held on a BI-weekly and monthly basis and meeting minutes taken representing current construction status. The general contractor CDS provided revised construction schedules that outlined current construction activities.

In summary, after bids were received for the building portion of the project, the building portion of that project had an estimate and a schedule. The building portion was completed primarily within that estimate and schedule except for scope changes and acquisition delays. As stated in the audit, the building project was completed well within industry standards even with the Open Records move change. Questions have been raised in the audit concerning contract oversight and enforcement. There may have been agreements and methods used in control of the project that were not completely in agreement with contract documents. These understandings between DPW, ZDG, and GPD worked well on this project, but these agreements and methods should have been formalized in contract amendments. Due to the size and duration of this project there were a number of changes in the City staff directly involved in the project due to retirements and relocations. Formalizing these items would have left a better record and history of the project and DPW will certainly improve the methods used to document future projects of

this scope and duration. However, these items did not impact the cost, timing or quality of the delivered product.

City of Milwaukee

Department of Administration
Budget and Management Division

John O. Norquist
Mayor

Michael J. Soika
Director

Joseph J. Czarnezki
Budget and Management Director

October 2, 2003

Ref: SF, Capital Improvements

W. Martin Morics
City Comptroller
City Hall, Room 401

Subject: Audit of Third District Police Facility Capital Project

Dear Mr. Morics:

I appreciate the efforts of the Comptroller's Office in their thorough audit of the Third District Police facility capital project and I thank you for the opportunity to comment on the audit on behalf of the Budget and Management Division.

We agree with the audit findings and have begun to address the issues raised in the audit. It is clear that there is a need for more involvement in the capital planning process and better monitoring of capital expenditures. I would like to take this opportunity to discuss the improvements we will be proposing. It is our intent to present these proposed changes in greater detail to the Common Council later this month.

Recommendation One focused on improvements to the planning phase of capital projects. In response to this recommendation, we will be modifying and enhancing the capital request form. The new form will include:

- Clear and detailed statement defining the project;
- Project justification, including the scope of the project, final project outcome, major assumptions and a cost/benefit analysis;
- Specific month-by-month, project timeline that includes progress and funding needs for each step of the project plan;
- Detailed and supported cost estimates, including documentation of the basis for the estimates; and
- Department responsible for the project and all other parties that will work on the project.

Some of these items are contained in the existing form, others need to be added. However, all existing questions will be enhanced with the aim on obtaining greater specificity. It is vital that project readiness, as well as project need, be able to be determined from responses to these questions. We will be placing greater emphasis on the amount and quality of details received from departments. The budget staff will perform a more thorough analysis of each project.

Recommendations Two and Three are related. These recommendations deal with the monitoring of capital projects and reporting to the Mayor and Common Council. It is our intent to provide information obtained

in the monitoring process to the Mayor and Common Council in report form on a regular basis. The report will include a summary that will reflect an overall capital improvement program status. The second portion will focus on larger projects with the final section covering all remaining projects. The purpose of these reports is to provide policymakers with the status of the projects and whether they are meeting the timeline established in the initial request and staying within budget. Greater detail will be provided on the larger projects because of the magnitude of potential problems.

It is our intent to provide this report on a quarterly basis to the elected policymakers. Internal monitoring will be done on a monthly basis. However, if there is a need to report on large capital projects on a more frequent basis, we will be prepared to do so.

The report will contain the following:

- A determination whether the project will be completed within the approved time frame;
- An estimate whether the project will be within budget; and
- Any problems that have occurred or may develop.

There must also be a formal process for approving changes to projects. Therefore, we will develop a process for modifying projects. This would mainly involve changes that would impact the project cost or delay project completion. Project costs would be based not on the total cost but on a more detailed category level. Approval would be required prior to a department undertaking any change to the project. Minor changes, perhaps those under 10% of the approved budget for the project, could be approved by our office. Changes above 10% would be required to receive approval from the Mayor and Common Council.

It is our intent to fully cooperate and work to improve the capital project process by implementing the audit recommendations. We look forward to working with the Comptroller, Mayor, Common Council, and city departments to ensure the improvements to the process are successfully implemented.

Sincerely,

Joseph J. Czarnezki
Budget and Management Director

DY:dmr
Capital:Auditresponse